



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 7140

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 40 (36 QTS)

RECOMMENDATION

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0948405	WC0908164	WC0855561
Sample Date		Client Info		16 Jun 2024	20 Feb 2024	06 Nov 2023
Machine Age	mls	Client Info		525241	501641	477659
Oil Age	mls	Client Info		23600	25000	25000
Filter Age	mls	Client Info		23600	25000	25000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>65	13	12	11
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>3	<1	0	<1
Titanium	ppm	ASTM D5185m	>5	<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>35	5	4	3
Lead	ppm	ASTM D5185m	>10	<1	0	<1
Copper	ppm	ASTM D5185m	>180	2	1	2
Tin	ppm	ASTM D5185m	>8	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

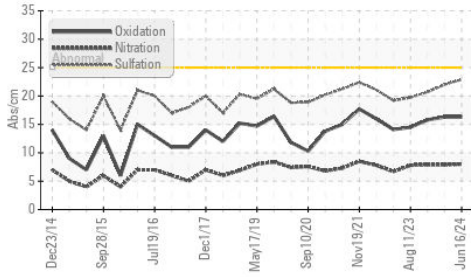
Silicon	ppm	ASTM D5185m	>15	6	4	4
Potassium	ppm	ASTM D5185m	>20	2	1	3
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.8	0.8
Nitration	Abs/cm	*ASTM D7624	>20	8.0	7.9	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.9	22.0	20.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

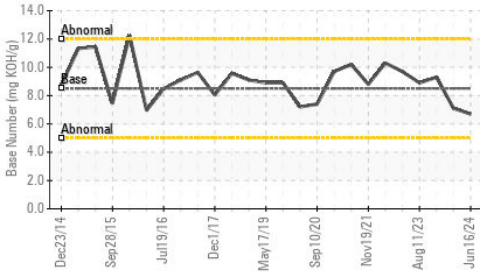
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>216	1	2	0
Boron	ppm	ASTM D5185m	250	253	205	1
Barium	ppm	ASTM D5185m	10	<1	0	<1
Molybdenum	ppm	ASTM D5185m	100	86	76	62
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	386	644	966
Calcium	ppm	ASTM D5185m	3000	1294	1428	1087
Phosphorus	ppm	ASTM D5185m	1150	976	1147	981
Zinc	ppm	ASTM D5185m	1350	1161	1454	1206
Sulfur	ppm	ASTM D5185m	4250	2893	3536	3389
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	16.3	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.7	7.1	9.3
Visc @ 100°C	cSt	ASTM D445	14.4	14.0	13.8	14.1

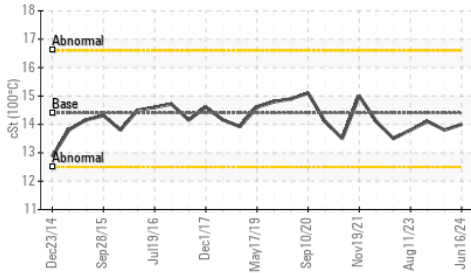
FT-IR (Direct Trend)



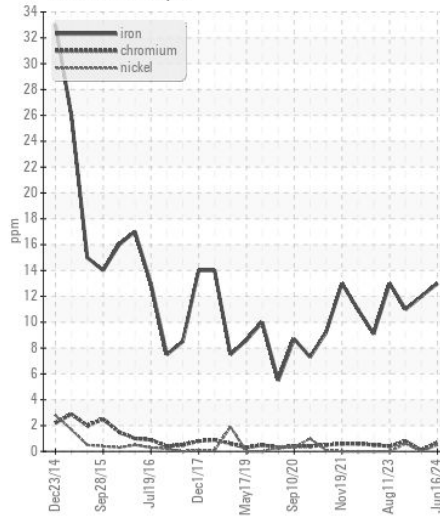
Base Number



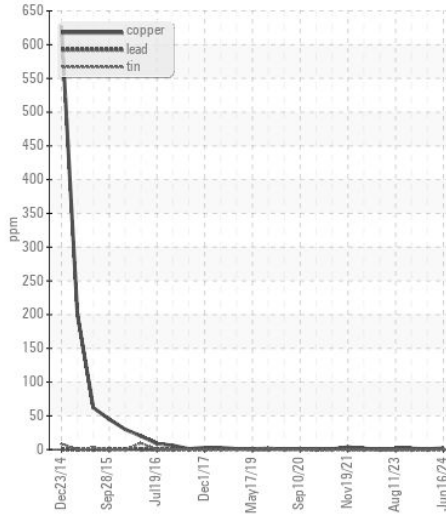
Viscosity @ 100°C



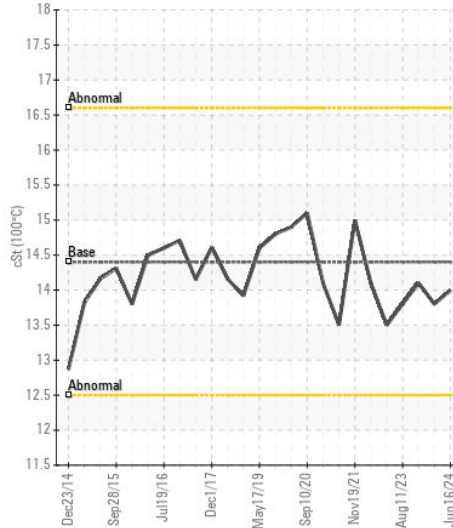
Ferrous Alloys



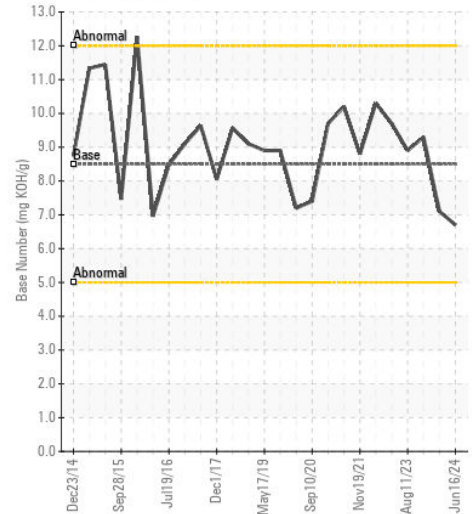
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0948405
Lab Number : 06213009
Unique Number : 11085873
Test Package : FLEET

Received : 17 Jun 2024
Tested : 19 Jun 2024
Diagnosed : 19 Jun 2024 - Wes Davis

SALEM NATIONALEASE CORPORATION
 198 PARK PLAZA DRIVE
 WINSTON SALEM, NC
 US 27105

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F: x:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)